

CLAIMS

1. A method of tracing a route between an origin node and a target node of a TCP/IP data network, the method consisting of defining a route tracing function having for parameters a start distance and an end distance and including the following steps:
 - stopping the recursive processing of the function if the start and end difference differ by one unit,
 - sending a message to said target node, with a time to live equal to an intermediate value between the start and end distances,
 - receiving a response and:
 - if said response comes from the target node, storing it in the list of known nodes and executing the tracing function recursively with the start distance and the target node distance as parameters,
 - if said response is a Time To Live Exceeded message coming from an intermediate node in said list of known nodes, executing the tracing function recursively with the intermediate node distance and said end distance as parameters, and
 - if said response is a Time To Live Exceeded message coming from an intermediate node that is not in said list of known nodes, storing said intermediate node in the list of known nodes and executing the tracing function recursively, a first time with the start distance and the intermediate node distance as parameters and a second time with the intermediate node distance and the end distance as parameters, and
 - initially executing said route tracing function with a start distance equal to 0.

2. A method according to claim 1, wherein said intermediate value is equal to the average of the start and end distances.

5 3. A method according to claim 1, wherein the end distance is initially fixed at twice the average of the distances of the nodes in said list of known nodes.

10 4. A method according to claim 1, wherein said time to live is stored in a Time To Live field conforming to RFC 791.

15 5. A method according to claim 1, wherein said message and said response conform to the ICMP defined by RFC 792.

6. Software including means for implementing the method according to claim 1.